

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003783**Date Inspected:** 27-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Kuan Chung**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower,Jacking and Deviation Saddle**Summary of Items Observed:**

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and repair of Saddles.

**NDT Inspection (Foundry Shop)**

On this date the QA representative Dong J. Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW foundry shop, QA Inspector observed NISC NDT Technicians Mr. A. Seno and Mr. H. Kohama perform ultrasonic testing on Casting T1-1. Ultrasonic testing was performed after rough machining. QA Inspector Mr. Dong Shin observed ultrasonic testing was performed by straight beam and angle beam testing and QA Inspector Mr. Shin confirmed calibration date of Ultrasonic testing unit, DAC curve and scanning pattern. Results were confirm in accordance with approved Ultrasonic testing procedures.

**Fabrication Shop # 4****NDT Inspection**

On this date the QA representative Dong J, Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW fabrication shop # 4, QA Inspector observed NISC NDT Technician Mr. Kobayashi and Mr. Kumagai perform Magnetic Particle testing on weld run off tab removal areas. Magnetic particle testing was performed utilizing a yoke with AC current and red visible particles.

On this date the QA representative Dong J, Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW foundry shop, QA Inspector observed JSW welding personnel Mr. Kato perform multiple root pass welding on T1-1. The multiple root pass welding of the rib plate to side plate, joint designation T1-1, 7Y-6V,

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## WELDING INSPECTION REPORT

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was performed utilizing the Shielded Metal Arc Welding (SMAW) process per the welding procedure specification (WPS) SJ-3011-2. The welding was performed in the 3G (Vertical) positions. The filler metal utilized was identified as 4.0mm diameter, Class E9018-M-H4R, Brand name Hoballoy 9018-M. The welding parameters and heat control were monitored by Intertek Testing Services Quality Control (QC) inspector Mr. Chung-Fu Kuan at periodic intervals. The minimum preheat temperature of 110 degrees Celsius and maximum interpass temperature of 260 degrees Celsius was verified to meet the WPS requirements by Mr. Kuan and the QA inspector utilizing Tempilstik temperature indicators. This data was entered into the QC inspector's daily log, identifying the location on a weld map. The SMAW welding average amperage and voltage by clamp type meter and travel speed were verified to be within the welding procedure specification parameter range of 140 amps to 165 amps, 21 volts to 24 volts and travel speed of 70 to 82 mm per minute for the 4.0mm electrode used. All welding parameters checked QC inspector and verified by the QA inspector. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

### Summary of Conversations:

No specific conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Shin,DJ	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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